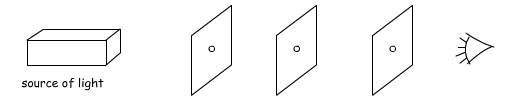
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| --- | --- | --- |
|  | **Physics** | **شعار-القسم** |
| **Optics** |
| Worksheet-6- |

|  |  |
| --- | --- |
| Name: Class: 8 /……........ | |
| Book pages: | |
|  | Date: -5-2012 |
| 8.17.3- 8.17.7- 8.17.8 | Core Standard number |
| . | Learning Objectives  Logo + text 2 |

**A- How does the light ravel?**

**1- Experiment**

**Set up the following experiment:**



a- How do you arrange the three cards to see the light?

Arrange the three cards in order to have the holes on the same line.

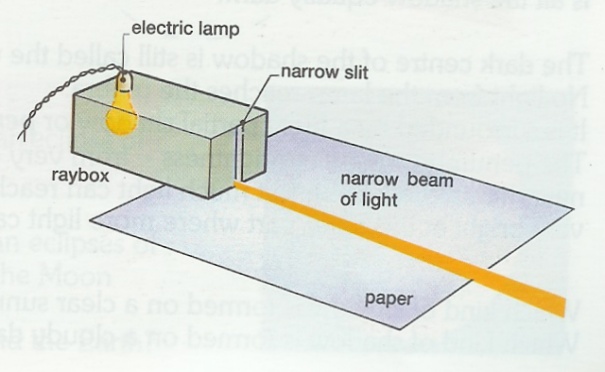
b- In case you see the light, pass a string through the holes. What is the shape that makes the string?

Straight line.

c- Move, a little, the card in the center: do you still seeing the light?

No.

2-How does light travel?

Light travels on straight lines.

B-Experiment-2

Set up the following apparatus

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1- What do you see on the piece of paper?

A beam of light

2- Set the hole in front of the light source as narrow as possible. What do you see?

We see a narrow beam of light called ray of light.

C- Experiment-3

1- Hold a table-tennis ball between the small electric lamp and the screen. What do you see on the screen?

We see shadow of the ball.

2- Choose the dimension of the light source as the dimension of the ball. Describe what you see on the screen?

We see the shadow of the ball : umbra and penumbra.

3- Complete the following figures:

Point source

Obstacle

Screen

a- Case of point source

b- Case of extent source

Extent source

Obstacle

Screen

D-Intensity of light

1- What is the relationship between the intensity of the light source and its wattage?

The intensity of light is directly proportional to the source wattage.

2- What is the relationship between the distance from the light source and its light intensity?

The intensity of light is inversely proportional to distance from the light source.